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(FILE 'HOME' ENTERED AT 11:10:04 ON 14 AUG 2007)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 11:10:24 ON 14  
AUG 2007

L1	0 S EMPHYSEMA AMD ASTHMA
L2	53127 S EMPHYSEMA
L3	6324 S L2 AND ASTHMA?
L4	223 S L3 AND CYTOKINE?
L5	11 S L4 AND CD4
L6	8 DUPLICATE REMOVE L5 (3 DUPLICATES REMOVED)
L7	3 S L6 AND PD<2003

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AN 1999235787 EMBASE

TI Differences and similarities between chronic obstructive pulmonary disease and asthma.

AU Jeffery P.K.

CS Dr. P.K. Jeffery, Lung Pathology Unit, Royal Brompton Hospital, Sydney Street, London SW3 6NP, United Kingdom

SO Clinical and Experimental Allergy, Supplement, (1999) Vol. 29, No. 2, pp. 14-26. .  
 Refs: 104  
 ISSN: 0960-2178 CODEN: CLASEN

CY United Kingdom

DT Journal; Conference Article

FS 005 General Pathology and Pathological Anatomy  
 015 Chest Diseases, Thoracic Surgery and Tuberculosis  
 026 Immunology, Serology and Transplantation

LA English

SL English

ED Entered STN: 27 Jul 1999  
 Last Updated on STN: 27 Jul 1999

AB Asthma and chronic obstructive pulmonary disease (COPD) are complex conditions with imprecise definitions, which make definitive morphological comparisons difficult. The airways in asthma are occluded by tenacious plugs of exudate and mucus, and there is fragility of airway surface epithelium, thickening of the reticular layer beneath the epithelial basal lamina (the last two not usually features of COPD), and bronchial vessel congestion and oedema. There is an increased inflammatory infiltrate comprising 'activated' lymphocytes and eosinophils with release of granular content in the latter, and enlargement of bronchial smooth muscle, particularly in medium-sized bronchi. CD4+ve lymphocytes predominate over CD8+ve cells and neutrophils are sparse. In contrast, three conditions contribute to COPD. In chronic bronchitis there is cough and mucous hypersecretion with enlargement of tracheobronchial submucosal glands and a disproportionate increase of mucous acini. CD8+ve lymphocytes predominate over CD4+ve cells and there are increased numbers of subepithelial macrophages and intraepithelial neutrophils. Exacerbations of bronchitis are associated with a tissue eosinophilia, apparent absence of IL-5 protein but gene expression for IL-4 and IL-5 is present. In small or peripheral airways disease, there is inflammation of bronchioli and mucous metaplasia and hyperplasia, with increased intraluminal mucus, increased wall muscle, fibrosis, and airway stenoses (also referred to as chronic obstructive bronchiolitis). Respiratory bronchiolitis involving increased numbers of pigmented macrophages is a critically important early lesion. Increasingly severe peribronchiolitis includes infiltration of T lymphocytes in which the CD8+ subset again predominates. These inflammatory changes may predispose to the development of centrilobular emphysema and reduced FEV1 via the destruction of alveolar attachments. In emphysema there is abnormal, permanent enlargement of airspaces distal to the terminal bronchiolus (i.e. within the acinus) accompanied by destruction of alveolar walls and without obvious fibrosis. The severity of emphysema, rather than type, appears to be the most important determinant of chronic deterioration of airflow, and in this there may be significant loss of elastic recoil and microscopic emphysema prior to the observed macroscopic destruction of the acinus.

CT Medical Descriptors:  
 \*chronic obstructive lung disease: ET, etiology  
 \*asthma: ET, etiology  
 respiratory epithelium  
 edema  
 mucus secretion  
 bronchus mucus

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edema

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bronchus mucus

pathogenesis  
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helper cell  
forced expiratory volume  
    emphysema  
chronic bronchitis  
histopathology  
bronchiolitis  
human  
conference paper  
priority journal  
Drug Descriptors:  
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interleukin 4: EC, endogenous compound  
interleukin 5: EC, endogenous compound

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